Duquesne among those retaining women, minorities in STEM

By Tracie Mauriello / Post-Gazette Washington Bureau

WASHINGTON -- Student bioethicist Patrice Starck didn't have to look far to find a role model. She's the daughter of the first African-American woman to earn a doctorate in biology from Purdue University.

Now the University of Maryland senior is about to enter a bioscience doctorate program herself at Harvard University.

A lot of other women and minorities in the sciences, however, don't have such easy access to role models. That's because so few of them are in the field.

Bayer USA Foundation wants to change that. It convened a conference of university professors last week to discuss ways to help women and under-represented minorities complete degrees in science, technology, engineering and math, known by the acronym STEM.

The aim is to encourage colleges to adopt programs that have proven to be successful on other campuses.

Duquesne University was among those invited to explain innovative programs that Bayer hopes will spread to other campuses across the country. Duquesne's program, supported by an $800,000 gift from Bayer, provides four-year scholarships, summer lab work, paid internships, academic guidance and mentoring for 20 women and minorities studying chemistry.

The mentoring part is key, said conference panelist David W. Seybert, dean of natural and biomedical sciences at Duquesne.

Miss Stark, who attended the conference, agreed.

"If you don't see someone who looks like you doing what you want to do, it's really daunting," she said. "You need someone who is relatively like you saying, 'Hey, I did it. You can do it.'"

Miss Starck, who grew up in New Orleans, is a tutor and mentor to other University of Maryland students, and said it's important for her to be a good role model to counteract discouragement that comes from stereotypes of the scientific abilities of women and minorities. One transfer student she mentors said...
a white male professor at another university told her she was better suited to be a model instead of a chemist.

That kind of discouragement is not uncommon, said Rebecca Lucore, executive director of the Bayer Foundation, which sponsored last week's panel and has conducted research on STEM education.

"One of the most startling things we've found is that a very large percentage of [women and minorities in STEM programs] say they've been discouraged at the college and university level," she said. "They choose to go to colleges and universities to pursue a career in that field, and they're being discouraged by their professors, they're not getting support and they don't have role models."

Even Duquesne -- which Bayer holds up as a model for its scholarship and mentoring program -- has had trouble attracting role models. The chemistry department tried for 20 years to hire female professors, but there were so few in the field -- and even fewer who wanted to be the only woman in a department of men, Mr. Seybert said.

A few years ago, two jobs opened up and the university was able to fill both with women. Since then, more have been hired for a total of five, including associate professor Ellen Gawalt, who now mentors students in the Bayer Scholars Program.

Mentoring isn't the only thing universities can do to help women and minority STEM students, said panelists, who included Clemencia Cosentino de Cohen of Mathematica Policy Research; Mary Frank Fox of the Center for Study of Women, Science and Technology at the Georgia Institute of Technology; S. James Gates of the President's Council of Advisors on Science and Technology; Freeman Hrabowski, president of the University of Maryland, Baltimore County; James Hicks of the National Science Foundation; and Ran Libeskind-Hadas, computer science chairman at Harvey Mudd College.

"We're going to have to figure out how we're going to change things," said panel moderator Mae C. Jemison, a physician and chemical engineer who was the nation's first African-American female astronaut. "Something is happening at colleges and universities that prevents them from completing [degrees]," she said.

Panelists suggested immersing students in research, allowing them to choose their own projects and encouraging students to work together so they learn from each other.

"We need to look in the mirror and see what we can do differently, get the culture of the campuses to rethink things," Mr. Hrabowski said.

Many panelists advocated for an end to courses meant to weed out students.

"That's not a hospitable climate for students. Let's teach students to move along rather than have them sink or swim and be weeded out," Ms. Fox said.
If a college accepts a student, it has a responsibility to help that student succeed, not to weed out that person, Mr. Hrabowski said.

Ms. Lucore said she hoped the discussion will result in real changes in college culture and in higher graduation rates for women and under-represented minorities.

"We are a science-based company and we need scientists in our future pipeline to innovate. We need STEM graduates and there just aren't enough of them," she said. "Bayer, like every company, wants more diversity ... because the more diversity, the more you can innovate and the more creativity that comes out."

Bayer USA is the philanthropic arm of Bayer Corp. Last year, it provided $9 million in support to nonprofits focused on education, workforce development, human services and the environment.

First Published 2012-04-23 04:04:04